System Size

Function Point Estimation

Unadjusted Function Points (TUFP)

Functionality	External Inputs (EI)	External Outputs (EO)	External Enquired (EQ)	Internal Logic Files (ILF)	External Interface Files (EIF)
Registering	1	0	1	0	1
Post listing/service	1	1	0	1	0
Pick listing payment type	1	1	0	1	0
Search	1	1	1	1	0
Request items	1	1	0	1	0
Contact other user	1	1	1	2	0
Rate other users	1	1	1	1	0
New listing notification	0	1	0	1	0
Delete listing/service	1	0	0	1	0

	Complexity				
Description	**Total #**	**Low**	**Medium**	**High**	**Total**
EI	8	4*3	2*4	2*6	32
EO	7	3*4	3*5	1*7	24
EQ	4	2*7	1*10	1*15	39
ILF	9	4*7	4*10	1*15	83
EIF	1	0*5	0*7	1*10	10
Total Unadjusted Function Point (TUFP):					188

The total processing complexity (PC):

Complexity Weighting Factor	Complexity Value (0-5)
Data communications	3
Team cohesion	1
Transaction rate	4
End-user efficiency	3
Familiarity with technology	4
Distributed data processing	2
Online data entry	5
Reusability	2
Extensibility (facility change)	1
Total Processing Complexity (PC):	24

The total adjusted function points (FP):-

FP = (0.65*(0.01*PC))*TUFP
FP = (0.65*(0.01*24))*188 = 29.328

Converting Function Points to Lines of Code (LOC)

85% will be done in C++
10% in JavaScript
5% in HTML

Language/Tool	LOC per FP
C++	53.33
Javascript	71.11
HTML	15

C++ : (29.328) * (53.33) * (0.85) = 1329
JavaScript: (29.328) * (71.11) * (0.1) = 209
HTML: (29.328) * (15) * (0.05) = 22
Total LOC: 1560LOC

Estimating Effort Required:-

$E = a * (KLOC)^b$ where a = 2.4 and b = 1.05 for application programs

$E = 2.4 * 1.56^{1.05} = 3.83$ person month

Estimating the schedule time:-

$Tdev = c*E^d$ where c = 2.5 and d = 0.38 for application programs

$Tdev = 2.5*3.83^{0.38} = 4.16$ months

Thus, the project will take approximately 4 months to complete with 4 people working on it.